

REMARKS

This application has been carefully reviewed in light of the Office Action dated November 3, 2008. Claims 1-12, and 17-22 remain in this application. Claims 1 and 17 are the independent Claims. Claims 1, 6, 7, 17, and 20 have been amended. Claims 13-16 have been canceled, without prejudice. It is believed that no new matter is involved in the amendments or arguments presented herein.

Reconsideration and entrance of the amendment in the application are respectfully requested.

Interview Summary

Applicant thanks the Examiner for the courtesies extended during the telephone interview conducted on December 3, 2008. Substantive matters discussed during the interview are incorporated in the present response.

Non-Art Based Rejections

Claims 1 and 17 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, the Final Office Action mentions that "In claims 1 & 17 the phrase regarding volume ratio of said matrix "in said granular substance" is not found in the specification and examiner interprets this to mean the volume ratio of the granular substance?". Applicant respectfully traverses this assertion and submits that support for this phrase is found, *inter alia*, on page 6, lines 17-18 of the present Specification.

Now that claims 1 and 17 specifically define that the granular substance of the present invention consists of a nonmagnetic insulating organic material and ferromagnetic metal particles, and the ferromagnetic metal particles are dispersed in the nonmagnetic insulating organic material. That is, the granular substance is the whole mixture of the nonmagnetic insulating organic material with the ferromagnetic metal

particles. The phrase "the volume ratio of said nonmagnetic insulating organic material in said granular substance" appears in the last part of claims 1 and 17. As the term "granular substance" means the above-mentioned mixture, i.e., a lump of the mixed material of the nonmagnetic insulating organic material and the ferromagnetic metal particles as a whole, the phrase "in said granular substance" is used in the last part of claims 1 and 17.

Reconsideration and withdrawal of the above § 112 rejections are respectfully requested.

Art-Based Rejections

Claims 1, 2, 3, 5, 6, 7, 17, 18, 19 and 20 were rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 6,602,620 (Kikitsu); Claim 4 was rejected under 35 U.S.C. § 103(a) over Kikitsu and in view of U.S. Patent No. 6,641,891 (Doushita); Claims 8-12 were rejected under § 102(b), in the alternative, under § 103(a) over Kikitsu and in view of U.S. Patent No. 6,262,867 (Sano).

Applicant respectfully traverses the rejections and submits that the claims herein are patentable in light of the clarifying amendments above and the arguments below.

The Kikitsu Reference

Kikitsu is directed to a magnetic recording medium. Kikitsu discloses a diblock copolymer layer that is annealed to form a self-organized structure called a sea-island structure. According to Kikitsu a self-organized structure is employed that sets the volume ratio of the magnetic particles at 30% or less, in order to prevent the exchange coupling between magnetic particles (*See, Kikitsu, Abstract, Col. 11, lines 37-51*).

The Doushita Reference

Doushita is directed to a particulate, high density magnetic recording media (*See, Doushita, Col. 1, lines 5-6*).

The Sano Reference

Sano is directed to a thin film magnetic head and a disk storage system having a magnetic disk and the thin film magnetic head provided on a floating type slider. (*See, Sano, Abstract*).

The Claims are Patentable Over the Cited References

The present application is generally directed to a granular substance.

As defined by amended independent Claim 1, a granular substance consists of a nonmagnetic insulating organic material; and ferromagnetic metal particles dispersed in the nonmagnetic insulating organic material and have a mean particle size of 50 nm or less. The volume ratio of the nonmagnetic insulating organic material in the granular substance is in the range of 5 to 50%.

The applied references fail to disclose or suggest the above features of the claims of the present invention. In particular, the applied references fails to disclose or suggest "wherein the volume ratio of said nonmagnetic insulating organic material in said granular substance is in the range of 5 to 50%," as required by amended independent Claim 1 of the present invention.

According to the Office Action col. 18, lines 44-54 of Kikitsu disclose a "block copolymer volume ratio of 30 percent or less. (*See, Office Action, page 3*), "which would be within applicants range." (*See, id.*) Applicant respectfully traverses this contention.

Kikitsu teaches a diblock copolymer layer that is annealed to form a self-organized structure called a sea-island structure wherein islands are made of

polyisoprene and the sea surrounding the islands is made of polystyrene. The island region disclosed in Kikitsu is etched to form holes corresponding to islands and a magnetic substance is deposited in the etched region, thereby the state in which the magnetic substance is dispersed in the resin sea is formed. In fact, Kikitsu describes that "An example of block copolymer contains polystyrene and polyisoprene at a ratio of 7:3", i.e., polystyrene sea: polyisoprene islands = 7:3. (See, *Kikitsu Col. 18, lines 31-33*.) As one of ordinary skill in the art would appreciate, this means that the ratio of the polystyrene sea is 70 vol% and the ratio of magnetic substance after the deposition is 30 vol%. Accordingly, the ratio of resin sea and the ratio of the magnetic substance disclosed by Kikitsu does not fall within the ranges defined by the present invention.

In contrast, amended independent Claim 1 of the the present invention requires that the volume ratio of the nonmagnetic insulating organic material be in the range of 5 to 50%, namely, the ferromagnetic metal particles occupies 50 to 95 vol% in the granular substance. Such a ferromagnetic metal rich volume ratio enables exchange coupling between the ferromagnetic metal particles, which results in obtaining of soft magnetic properties compared to the prior art, such as Kikitsu, which prefers to prevent the exchange coupling between the magnetic particles. (See, Specification, last column of page 11 and the first column of page 12.).

Accordingly, Kikitsu fails to disclose, teach or suggest the above features of amended independent Claim 1 of the present invention.

Doushita and Sano references fail to remedy the above-noted deficiencies of Kikitsu

Since the cited reference fails to disclose, teach or suggest the above features recited in amended independent Claim 1, these references cannot be said to anticipate nor render obvious the invention which is the subject matter of that claim.

Accordingly, amended independent Claim 1 is believed to be in condition for allowance and such allowance is respectfully requested.

Applicant respectfully submits that amended independent Claim 17 is allowable for at least the same reasons as those discussed in connection with amended independent Claim 1, and such allowance is respectfully requested.

The remaining claims depend either directly or indirectly from amended independent Claims 1 and 17 and recite additional features of the invention which are neither disclosed nor fairly suggested by the applied references and are therefore also believed to be in condition for allowance and such allowance is respectfully requested.

Conclusion

Applicant believes the foregoing amendments comply with requirements of form and thus may be admitted under 37 C.F.R. § 1.116(b). Alternatively, if these amendments are deemed to touch the merits, admission is requested under 37 C.F.R. § 1.116(c). In this connection, these amendments were not earlier presented because they are in response to the matters pointed out for the first time in the Final Office Action.

Lastly, admission is requested under 37 C.F.R. § 1.116(b) as presenting rejected claims in better form for consideration on appeal.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (310) 785-4721 to discuss the steps necessary for placing the application in condition for allowance.

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If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

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